AVEVA

WHITE PAPER

From disruption to differentiation:

A playbook for consumer products companies in the AI era

With the right smart manufacturing strategy, consumer products companies can increase their productivity and agility to ensure a profitable and responsible future.

Executive summary:

For consumer products companies, every day brings the possibility of change. From supply chain disruptions to changing regulations and volatile markets, there's no telling what a new day will bring—and companies must be prepared. Consumer products companies can't afford to risk their reputation as they adapt to rapid change. They must overcome key challenges and ensure agile operations to stay profitable while continuing to deliver high-quality products.

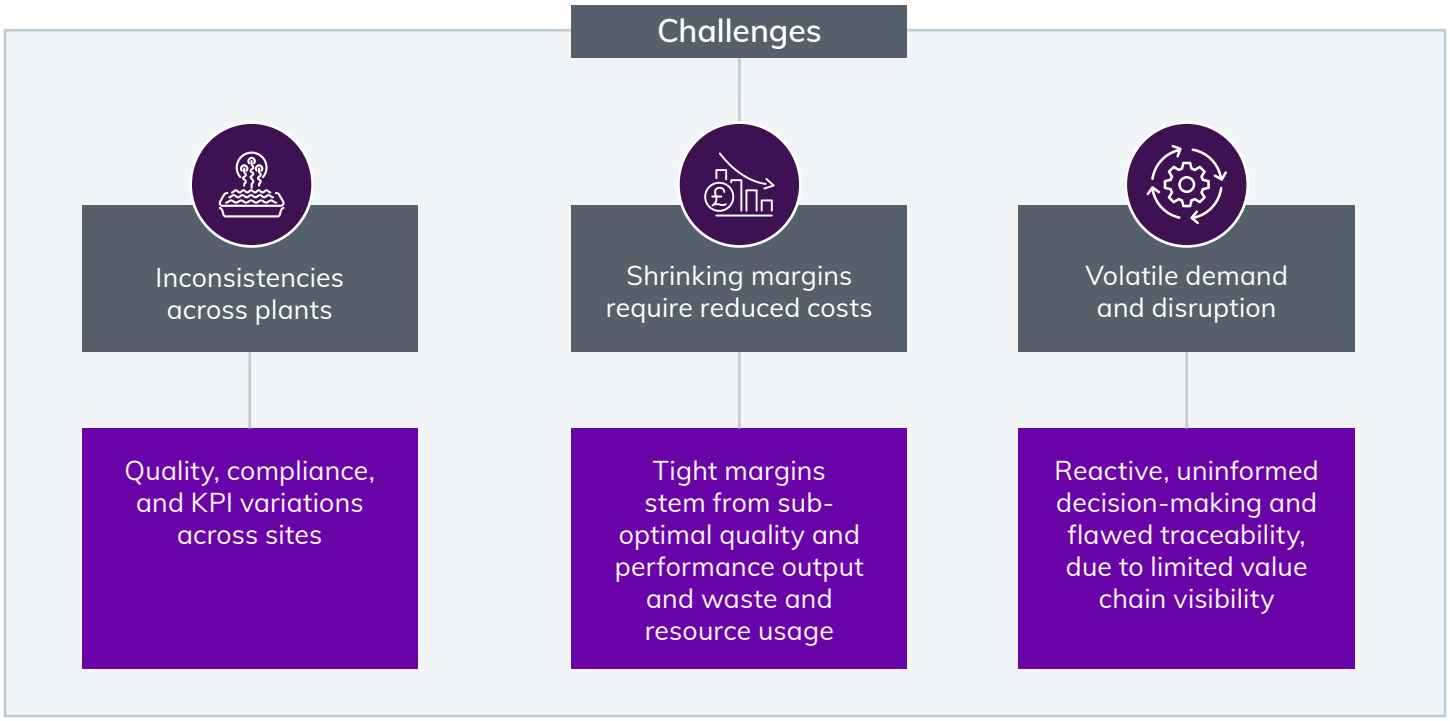
Now, consumer products companies globally are embracing smart manufacturing initiatives to empower their teams and partners with actionable, data-driven insights. With these insights, companies are increasing productivity to improve profitability, becoming more agile to meet customer demand in volatile market conditions while quickly scaling successful improvement practices with AI and machine learning (ML) models across their fleet of plants.

Here's how to take action to ensure the long-term success of your consumer products operation.

Adapting to constant change requires a new approach to manufacturing

Volatile market conditions and ever-expanding regulations are forcing consumer products companies to become increasingly agile and efficient to sustain a profitable business. Mergers and acquisitions and plant-level strategies often result in an array of disparate systems, creating data silos that prevent corporate users from gaining the overarching insights they need to compare plant metrics and make improvement decisions. In the meantime, companies must meet regulatory and net-zero goals, meet customer needs at price points they can afford, and continue to manufacture quality products while ensuring consumer safety compliance to protect their brand reputation.

As the pressure ramps up from all sides, consumer products companies must increase productivity and profitability at scale and innovate to meet customer expectations. The question is: How?



To stay competitive, consumer products companies must drive standardization of work along with a consistent hierarchy of KPIs, from a single packaging line to a fleet of plants, to empower plant operators and stakeholders across functions and locations to make agile and intelligent decisions. When standardization and collaboration intersect, brands can improve plant productivity, lower CO_2 footprints, and increase customer satisfaction.

Enter smart manufacturing

Using advanced technologies to enable data-driven optimization and team collaboration, smart manufacturing drives the industrial intelligence that consumer products companies need to make the right decisions at the right time, both within plants and across the value chain.

92% of manufacturers believe smart manufacturing is the key driver in maintaining competitive advantage, while 85% believe smart manufacturing will transform how they make products and improve agility.[1]

Here are the three top challenges consumer products companies face and how to overcome them by transforming plants into smart factories and connecting them into a smart manufacturing ecosystem.

Challenge:
Inconsistencies across plants

Solution:
Connect and compare plants to identify and scale best practices

Many consumer products companies operate networks of distributed plants, some of which came through mergers and acquisitions. Unfortunately, the result is often disparate systems and technologies and varying levels of automation, and these silos make it impossible to discover and share best practices for elevating plant productivity and to reduce compliance risks consistently across the business. By connecting all manufacturing assets, systems, and workers into standardized solutions, companies can automate data capture, track material and production with end-to-end traceability, and enforce compliant work and quality control procedures. From there, they can bring together unified data sets into a single operations data platform for enterprise-wide access, supply chain visibility, and use with proven industrial AI and machine learning to quickly share valuable insights and scale successful advanced analytics models across factories.

Ilovo Sugar: Increased visibility into operations leads to improved OEE.

When **Illovo Sugar**[2], a leading producer of bulk and consumer sugar products, added new consumer packaging size and shape variations, the change resulted in inconsistent product weights and costly downtime from their form fill and seal (FFS) machines.

With little reliable data to perform root cause analysis, Ilovo partnered with AVEVA to deploy leading industrial data management solutions, including AVEVA™ PI System™ and used asset framework templates in AVEVA™ PI Server to quickly create a real-time reporting system to track performance and downtime across its 49 packing machines in five sites and three countries.

These reports and AVEVA™ PI Vision™ machine dashboards helped the team isolate both human and machine performance issues so they could be addressed and improved.

The result? Illovo improved the overall equipment effectiveness of their FFS packing machines by 30%, increased performance by up to 50%, and availability by up to 25% in just three months.

Amcor[3]

A global leader in packaging, deployed AVEVA™ Manufacturing Execution System across 23 of its facilities to consistently measure performance KPIs, improving cycle times by 3% and OEE by 2%. Next, Amcor assembled data from multiple plants on CONNECT to predict asset and quality anomalies with AVEVA™ Advanced Analytics, further decreasing downtime by 1-2%.

Take action:

Choose an industrial platform with agnostic connectivity and scalable services to connect your operations and optimize performance across the manufacturing network.

Challenge:
Shrinking margins require reduced costs

Solution:
Optimize operations with AI-generated insights and recommendations

Nothing threatens profit margins like unplanned downtime, quality losses, and waste of resources. Equipment failures and quality issues can bring plant operations to a standstill or result in waste and costs without generating revenue. In today's market, even real-time monitoring isn't enough. Consumer products companies must take a predictive—even prescriptive—approach. By using machine learning algorithms with plant data, users can receive alerts and notifications of process and quality anomalies and take quick corrective action to minimize the impact of potential issues before they become costly failures. Plant workers can be empowered with AI-generated prescriptive recommendations to optimize yield, quality, throughput, and energy usage in real time. Using a combination of machine learning and GenAI, operators can perform more complex root cause analysis to systematically cut waste and losses.

Maple Leaf Foods: Enabling purpose-built industrial AI and analytics with AVEVA

Maple Leaf Foods[4], Canada's largest prepared meats and poultry producer, wanted to find new ways to improve productivity using IoT and AI at its heritage site. With a goal of finding ideal operating conditions for its bologna product to improve yield and reduce waste, Maple Leaf Foods used its existing AVEVA Manufacturing Execution System and SCADA data, along with advanced AI models to enable near real-time awareness and response on the plant floor.

By focusing on eight specific use cases to reduce waste at each stage—from log length to slicing to pickling—the company used AI-enabled insights to define the recipe for the "golden batch." By implementing the ideal parameters identified during the deeper analysis, the company maximized yield by making a consistent product, cooked exactly to the right amount and sliced at exactly the right dimensions every time. As a result, the company reduced waste and improved yield, increasing gross profit by 10-12%.

Barry Callebaut[5]

After several mergers and acquisitions, chocolate manufacturer Barry Callebaut partnered with AVEVA to deploy the best industrial AI platform for smart manufacturing to standardize data across factories. Thanks to increased visibility and predictive models, the team uncovered new insights and optimization possibilities, including the opportunity to improve production capacity by 10%.

Take action:

Use proven industrial AI tools that can be easily integrated with your data, suited to your operators' daily cadences, and can quickly replicate success from one factory to another.

Challenge:
Volatile demand and disruption

Solution:
Improve value chain visibility and collaboration to enable business agility

Volatility is everywhere in the consumer products industry. From unpredictable demand to changing customer behavior, unplanned internal events, and supply chain disruptions, companies must become increasingly agile and resilient to survive. Real-time, end-to-end visibility into the plant network and production is critical, and to ensure accuracy, brands must establish an operational single source of truth. With this newfound visibility, companies can improve collaboration across functional teams to drive better planning decisions and deliver feasible supply chain plans on time and in full.

Once the single source of truth is established, companies can create a data-sharing ecosystem that gives internal key stakeholders enterprise-wide access to operational data and information views and enables them to selectively share data and information with supply chain partners, service providers, and customers. By improving value chain visibility and transparency into how their products are made, companies can create new value with their partners to remain competitive, improve customer satisfaction, and sustain business growth in a challenging environment.

Agropur: Value chain visibility to optimize operations and drive innovation

Agropur[6], one of the top dairy processors and cheese makers in the world, has 29 different sites in North America. Up until a few years ago, each site used its own operational data management system, which prevented the company from gaining full visibility across plants and made ongoing support difficult. Agropur saw the value in transitioning to a unified, sustainable solution, so the company embarked on a business transformation journey with AVEVA, the best software portfolio for multi-site standardization.

The program, called LEAP, simultaneously deployed SAP and AVEVA Manufacturing Execution System in an initial scope at 15 sites in just 18 months, enabling them to retire all legacy systems. Agropur then added more MES functionality, further streamlining data collection, access, and calculations, while also deploying CONNECT, a cloud-based and centralized data-sharing solution for analysis, reporting, and trends. Now, this integrated solution enables users to manage operations and analyze operational data across plants, helping to improve OEE. What's more, CONNECT gives them enterprise-wide real-time visibility into divisions and plant production performance KPIs.

Henkel[7]

Henkel, a global leader in consumer goods, partnered with AVEVA to deploy a global industrial data management solution in its Laundry and Home Care Division to meet its sustainability and efficiency goals. With a single source of truth, Henkel has massively reduced energy consumption, saving upwards of €37 million since project inception and improved OEE by 15% in just two years.

Take action:

Enable an agile ecosystem by establishing a single version of operational truth for all internal stakeholders and providing a federated view of your data to your suppliers and customers.

Conclusion

While consumer products face daunting challenges, they are not insurmountable. In today's unpredictable world, consumer products companies can connect and compare their plants and use industrial intelligence to increase productivity, profitability, and growth at scale, and they can meet consumer demand in even the most volatile of markets by turning their fleet of plants into an agile manufacturing ecosystem.

AVEVA offers the world's best solutions for the world's consumer products companies. Learn why.

Challenge	Solution	Take action
Inconsistencies across plants mean quality, compliance, and KPI variations.	Connect and compare plants to identify and scale best practices.	Adopt an agnostic, cloud-enabled platform to connect all your operations.
Shrinking margins require reduced costs. Tighter margins stem from sub-optimal quality and performance output and resource usage, as well as excess waste.	Optimize operations with AI-generated insights, analytics, and recommendations.	Optimize operations across plants with industrial AI and advanced analytics tools that work for your data.
Volatile demand and disruption lead to reactive, uninformed decision-making and flawed traceability, due to limited value chain visibility.	Improve value chain visibility and collaboration to enable business agility.	Enable an agile, secure data-sharing ecosystem by establishing a single source of truth.

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